

WHAT IS CLAIMED IS:

1. A capacity detection type sensor element comprising:
a vibrating plate and a flat back electrode which are provided
5 opposedly with each other; and
a plurality of fixing portions which are provided adjoining to said
vibrating plate, and has a predetermined length A of edge at a side
adjoining to said vibrating plate, wherein
said back electrode is held by said fixing portions in a state that
10 space is provided between said back electrode and said vibrating plate, and
the shape of outer edges of said back electrode which are not held by
said fixing portions between said adjoining fixing portions, is a
predetermined shape located on substantially straight lines that connect
said adjoining fixing portions with the shortest length or on outside of said
15 straight lines.
2. The capacity detection type sensor element according to claim 1,
wherein said predetermined shape is a circular arc which has said shortest
length between said adjoining fixing portions as a chord.
- 20 3. The capacity detection type sensor element according to claim 1,
wherein ratio of the predetermined length A of said fixing portion and
distance B of said opposing fixing portions is larger than $2/15$.
- 25 4. The capacity detection type sensor element according to claim 3,
wherein said ratio of the predetermined length A of said fixing portion and
the distance B of said opposing fixing portions is equal to or larger than
 $4/15$.
- 30 5. The capacity detection type sensor element according to claim 1,
wherein a plurality of holes whose diameters are smaller than $20\text{ }\mu\text{m}$, are
provided on said back electrode.
- 35 6. The capacity detection type sensor element according to claim 1,
wherein a plurality of holes whose diameters are smaller than $14\text{ }\mu\text{m}$, are

provided on said back electrode.

7. The capacity detection type sensor element according to claim 1,
wherein the shape of said fixing portion a rectangle.

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8. The capacity detection type sensor element according to claim 1,
wherein the shape of said fixing portion is a triangle.